NRCREP Resource

From:

Autumn Szabo

Sent:

Monday, November 03, 2008 8:06 AM

To: Subject: NRCREP Resource DG-5026 Public Comment

Attachments:

10-30-08 DG-5026 Enclosure.doc

This was received informally through other sources.

Autumn Szabo

Human Factors Engineer

United States Nuclear Regulatory Commission

Mailstop: T10-E50

Washington, D.C. 20555-0001

Phone: 301-415-6587 Fax: 301-415-5160 9/29/08 RED 73 FR 566.18 70% NOV -3 PM 4:19

RULES AND DIRECTIVES
BRANCH
US:190

This email may contain sensitive information and is intended only for the entity to whom it was addressed. This message contains no expressed or implicit authorization to share or disclose its contents. If you believe you have received this message in error, please notify the sender and promptly destroy this and all related messages.

SUNSI Review Complete Templete - ADre-013 E-RIDS = ADM-03 Oll = M. Ore (mpo1) V. Prames (VXb3)

Exception 1 – Periodic Overtime

Comment:

Based on feedback that was received in the October 16 public meeting on the fatigue management rule, the industry has changed the implementation guidance on Periodic Overtime. The implementation guidance was changed to require, at a minimum, a quarterly review of actual work hours for covered workers against the 54-hour per week average criteria. Additionally, it requires that issues found during this review be documented in the station's corrective action program. The industry requests that the staff reconsider their position on periodic overtime and endorse the industry position stated in NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1 Section 7.1, "Periodic Overtime."

Explanation of the Issue:

This issue involves the impact of overtime on required minimum days off. The rule defines minimum days off by the shift schedule of the worker. The rule is written such that the method for determination of the shift schedule is not precisely defined.

The position that the NRC staff has provided in the DG-5026 would result in a running average of hours worked during a work cycle to determine the minimum days off in that work cycle. This position results in minimum flexibility in assignment of overtime and has some unintended consequences with continuity of supervision and emergent work activities.

For example, a worker that is assigned either an 8-hour per day, 5 days a week schedule or a 10-hour per day, 4 days a week schedule both including a 30-minute lunch period, could have a shift change with as little as 16 hours of overtime in a 6-week period. It is reasonable to expect that many supervisors of covered workers will work in excess of 16 hours per 6-week period of overtime to perform the normal expectations of supervision. The averaging method would place a significant number of supervisors on a different schedule than the workers they supervise. When an issue occurs at a station, the supervisor of the crew needed to respond may not be allowed by work hour restrictions and another supervisor would be required.

In addition, the averaging method provided in DG-5026 places too much importance on when an emergent issue occurs and restricts management flexibility in resource assignment. Emergent plant needs are not predictable and licensee management needs flexibility to address emergent safety and reliability issues. The response of the station in applying resources to an emergent issue could change based simply on when the emergent issue occurs (i.e. early or late in a shift cycle). For emergent issues that occur late in the shift cycle it could likely require a waiver, but if the identical emergent issue occurs early in a shift cycle, adjustment of resources could likely negate the need for a waiver.

The method presented in NEI 06-11 where the schedule is assigned does not result in these unintended consequences. The industry understands the staff's concerns with excessive use of periodic overtime and has placed guidance for distinguishing between periodic overtime and a schedule change into the guidance. Based on discussions, we have agreed to require at a minimum, a quarterly review against the 54 hours per week over a shift cycle criteria and for deviations to be addressed in the corrective action program. These requirements will prevent the abuse of chronic periodic overtime and provide transparency of chronic abuse to the regulator through the corrective action program. The corrective action program is a regulatory requirement, which is readily available for inspection via the problem identification and resolution inspection procedure.

Industry Position:

The industry's position is stated in NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1 and is summarized below.

Section 7.1 Periodic Overtime

Periodically, workers and supervisors will need to work overtime to meet station needs. This overtime will be worked while meeting all work hour rules, for both time at work, break requirements, and minimum days off, consistent with the individual's shift schedule. The use of Periodic Overtime shall be evaluated by plant management on a quarterly basis as described below.

To distinguish between periodic overtime and an actual change of shift, the following need be considered:

- ◆ Is the time worked on the different shift duration for a period of time less than the shift cycle duration?
- ◆ Is the change in shift duration done infrequently throughout the year?
- ♦ Is the change in shift duration for a specific reason (specific work window support, special test, pre- or post-outage period, etc.) with a defined purpose and duration?

The relationship between established schedules and periodic overtime can be summarized as follows:

- ◆ The licensee prepares a shift schedule that meets the requirements of § 26.205(c) duration, frequency, or sequencing of successive shifts.
- ♦ Minimum days off requirements of § 26.205(d)(3) are applied for that assigned shift schedule
- Assigned overtime is maintained within the guidance of the work hour rules per § 26.205(d)(1) and breaks applied per § 26.205(d)(2)
- ♦ The Corrective Action Program is used to identify and evaluate the conditions which lead to individuals working an average of more than 54 hours per week within a shift cycle
- ◆ The use of Periodic Overtime shall be evaluated by plant management on a quarterly basis as follows: The average work hours of covered employees will be reviewed on at least a quarterly period and instances of covered workers exceeding an average of 54 hours in a work period will be documented in the corrective action program and reviewed to determine if a shift change is appropriate.

Exception 2 - Transitions

Comment:

Based on discussion at the October 16 public meeting on the fatigue management rule, the industry has changed the implementation guidance to include draft regulatory position 4 into NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1.

Explanation of the Issue:

This involves transition of workers into or between covered work categories. The rule is not complete on requirements for transition of workers. The rule provides requirements on covered workers while they are assigned covered work, but does not define

requirements for workers prior to beginning covered work or transitioning between differing requirements.

Industry Position:

NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1 has revised sections 7.3 and 7.4 as follows:

7.3 Transitioning Onto a Shift or Between Covered Groups or Into a Covered Group

If an individual begins or resumes performing for the licensee any covered work during the shift cylce, the licensee shall include in the calculation of the individual's work hours all work hours worked for the licensee, including hours worked performing duties that are not covered work and control the individual's work hours in accordance with the following requirements.

Except as permitted by waivers and exceptions, licensees shall ensure that any individual's work hours do not exceed the following limits:

- ◆ 16 work hours in any 24-hour period
- **♦** 26 work hours in any 48-hour period
- ◆ 72 work hours in any 7-day period

Except as permitted by waivers and exceptions, licensees shall ensure that covered individuals have the following breaks and minimum days off:

A 10-hour break between successive work periods, or an 8-hour break between successive work periods when a break of less than 10 hours is necessary to accommodate a crew's scheduled transition between work schedules or shifts.

A 34-hour break in any 9-calendar day period.

A minimum of 1 day off in the preceding 7-day period is acceptable for individuals to begin or resume covered duties and for individuals who have been working an 8-hour shift schedule, as either day or shift workers, and are transitioning (1) from a non-covered group to a covered group or (2) from a covered group to another covered group that has more stringent MDO requirements.

A minimum of 2 days off in the preceding 7-day period is acceptable for individuals who have been working a 10- or 12-hour shift schedule, as either day or shift workers, and transition (1) from a non-covered group to a covered group or (2) from a covered group to another covered group with more stringent MDO requirements.

A minimum of 2 days off in the preceding 7-day period is acceptable for operators who have been working outage hours on 10- or 12-hour shifts before they transition to the non-outage unit as one of the two required operators working non-outage minimum days off. This does not preclude short term relief of the non-outage unit operators as described in Section 8.3.

Exception 3 – Outages

Comment:

Based on discussion at the October 16 public meeting on the fatigue management rule, the industry has changed their position and revised the implementation guidance to include a minimum of 1 Reactor Operator and 1 Senior Reactor Operator for each operating reactor at a multi-unit station will not be eligible for outage minimum days off.

Additionally, as was discussed, the 25% criteria for determining participation in outage activities will be deleted. The industry requests that the staff reconsider their position on eligibility for outage minimum days off and endorse NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1.

The industry also request that the statements of consideration for 10 CFR Part 26 be revised to reflect the Commission's action to remove "solely" from the rule.

Explanation of the Issue:

The issue involves the eligibility of covered workers to work the less restrictive outage minimum days off at multi-unit stations with one unit in an outage and other unit(s) operating. The issue impacts all covered groups with the exception of security workers.

The industry understands the only difference between operating and outage work hour restrictions to be minimum days off. The allowance for outage minimum days off is limited to 60 days for the purpose of managing fatigue during periods of high work activities. The operating work hour restrictions are in place to assist in management of chronic fatigue. In both cases, the restrictions are sufficient to manage personnel fatigue.

Through discussions, the industry understands the expectation of the NRC staff that a portion of the minimum operating staff including the operator at the controls of the operating unit remain within the non-outage minimum days off requirement. The industry recommendation is that 1 reactor operator and 1 senior reactor operator remain under the non-outage minimum days off requirements. This recommendation would ensure that the operator at the controls and the operating control room supervisor would be in compliance with the non-outage minimum days off.

This recommendation allows for short term relief of the operator at the controls and the operating control room supervisor by operators that are working outage work hours. Additionally, this would not preclude the assignment of operators to the non-outage units for periods of increased activities on the operating unit.

The proposal in DG-5026 to require that backup operators also are maintained on nonoutage minimum days off creates an undue hardship on utilities and could result in an increased number of work hour rule waivers to fill backup operator positions.

The guidance in NEI 06-11 Revision 1 complies with the rule requirement that the minimum days off relaxation is applied while working outage activities and provides a clear set of conditions for when the relaxation is applicable. The guidance results in a manageable set of outage restrictions with the basis that the industry expects workers to be fit for duty during operating or outage periods. The minimum days off requirements are only one barrier included in the rule that manages fatigue in workers; others include work hour restrictions, break requirements, behavioral observation, self-declarations and training.

This guidance together with the rule requirement that only allows the outage minimum days off requirement for a maximum of 60 days provide reasonable assurance of proper fatigue management of workers during an outage period.

The industries proposed table for Part 26:

Number of Operating Nuclear Power Units	Positions	Two Unit Site		Three Unit Site				
				Two Control Rooms				
		One Control Room	Two Control Rooms	Single Control Room Unit in Outage	Single Control Room Unit and 1 Unit Served by Dual Control Room in Outage	1 of the 2 Units Served by Dual Control Room in Outage	2 Units Served by Dual Control Room in Outage	Three Contr ol Room s
One	Senior Operator	1	1	N/A	1	N/A	1	1
	Operator	1	1	N/A	1	N/A	1	1
Two	Senior Operator	N/A	N/A	2	N/A	2	N/A	2
	Operator	N/A	N/A	· 2	N/A	2	N/A	2

Industry Position:

The industry's position is stated in NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1 as follows:

Workers Eligible to Work Outage Hours

- **♦** Covered workers at single sites working on outage activities are eligible
- ◆ Covered workers at multi-unit sites with one unit in an outage that are working on outage activities are eligible
- ♦ Covered workers, due to Emergency Response Organization, Fire Brigade, or Security duties, at a multi-unit sites with a unit in an outage are eligible
- Covered workers at multi-unit sites that work on both outage activities and operating unit activities are eligible, with the exception described below

Workers Not Eligible to Work Outage Hours

One (1) Reactor Operator assigned to the controls and One (1) Senior Reactor Operator assigned to the controls for each operating unit at a multi-unit station while any unit is in an outage. This does not prevent short term relief of these licensed operators by licensed operators that are eligible for outage work hours

Eligibility should be established on an individual or defined group basis. Eligibility should be evaluated each 15 days for each individual or defined group during the outage.

Background on Statement of Considerations:

In the attached April 17, 2007, Staff Requirements Memorandum approving the Part 26 final rule, the Commission changed a requirement for outage work hour controls by modifying the draft final rule language (see SRM Attachment item 15). Specifically, the Commission directed the staff to replace "working on unit outage activities" with "solely performing outage activities" in the first sentence of § 26.205(d)(4) and any other pertinent sections to clarify the requirements.

The industry responded to this change by the attached letters dated April 24, 2007 and May 8, 2007 to the NRC Chairman stating this language change (1) will result in a significant negative impact on plant outage resources and/or schedule, (2) will lead to unequal distribution of work hours between operating unit and outage unit personnel, a violation of collective bargaining agreements at many utilities, and (3) could have a negative impact on nuclear safety.

On July 3, 2007 Chairman Klein issued the attached "REQUEST FOR RECONSIDERATION OF THE WORDING OF 10 C.F.R. § 26.205(d)(4) AS AFFIRMED ON APRIL 17, 2007." In his request for reconsideration he stated the following:

"One specific change from the proposed draft final rule, based on my initiative during the development of the SRM, was to replace "working on unit outage activities" with "solely performing outage activities" in the first sentence of § 26.205(d)(4). See SRM of April 17, 2007 (Item 15 of the Comments and Changes to the Final Rule in SECY-06-0224). This section of the rule addresses the limits on plant personnel work hours and distinguishes between work performed on an operating plant and a plant that is in an outage. The change to the wording was intended as a simple clarification. I now believe it was a mistake for me to suggest it without fuller consideration. It could result in unintended consequences that are potentially significant and could impede final implementation of the rule. The Nuclear Energy Institute has submitted letters of April 24, 2007, and May 8, 2007, in which it alleges potential impacts on nuclear safety, staffing, collective bargaining agreements, and costs of implementation. I am also concerned that the change in language may prompt much greater consideration of waiver requests, which is an undesirable outcome for a new rule provision.

In my view, sufficient questions are raised by this particular late change in rule language to warrant a Commission decision, as a matter of policy, to revert to the language "working on unit outage activities" as proposed by staff in the draft final rule that was before the Commission and available to the public when the Commission affirmed the final rule on April 17, 2007. As planned, the staff should continue to engage the industry and other stakeholders to complete the regulatory guidance for this rule, with the restored language.

Therefore, I recommend that the Commission agree to reconsider the change in language in 26.205(d)(4) and support prompt affirmation on this proposal to modify the final rule by restoring the words "working on outage activities" in place of "solely performing outage activities" in the first sentence of § 26.205(d)(4) and any other pertinent sections."

In the attached record of the Affirmation Session, Tuesday, July 24, 2007, the Commission approved reconsideration of this one provision of the rule and approved the final rule as affirmed on April 17, 2007, with this modification. The NRC Commission directed that the word "solely" be removed from section 26.205 of the rule and be

replaced with "while working outage activities". The final rule reflects the Commission's action on the issue of "solely performing outage activities". The final rule uses the phrase "while those individuals are working on outage activities".

Unfortunately, the Statements of Considerations of the published rule are contrary to the Commission's action on the issue of "solely performing outage activities". Statements of Considerations state the following, "If at any time during a unit outage an individual performs duties specified in § 26.4(a)(1) through (a)(4) on or for a unit that is not disconnected from the electrical grid, the individual is subject to the minimum day off requirements of § 26.205(d)(3) while the individual is performing those duties, except as permitted by § 26.205(d)(6)."

In plain language, the statement is, if at any time during a unit outage an individual covered by work hour restrictions performs duties (except security) on or for a unit that is operating, the individual is subject to the minimum day off requirements for normal operations. This statement is clearly equivalent to "solely performing outage activities." This requirement is not necessary to protect against personnel fatigue and also the industry believes this statement is in conflict with the Commission's actions on "solely performing outage activities".

Regulatory Position 1

Comment:

Based on discussion at the October 16 public meeting on the fatigue management rule, the industry has revised the description of activities excluded from maintenance. The industry requests that the staff endorses a position that activities that have not historically been defined as maintenance, that are non-intrusive, and pose low risk to the health and safety of the public be excluded from covered work as described in NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1.

Explanation of the Issue:

This issue is the scope of maintenance activities that can be excluded from covered work. As we discussed at the October 16 public meeting on the fatigue management rule, the addition of the descriptors "surveillance" and "preventive" into the rule definition result in the expansion of covered work to groups that were not intended to have work hour controls. This includes such categories as performance of reactor engineering calculations required by technical specifications, system engineering walkdowns that are performed using a preventive maintenance work orders, or analyzing and trending predictive maintenance data such as pump vibration or thermography.

The rule defines work hour restrictions as applicable to workers performing maintenance or onsite directing maintenance of SSCs that a risk-informed evaluation process has shown to be significant to public health and safety. The rule definition of Maintenance is:

Maintenance means, for the purposes of § 26.4(a)(4), the following onsite maintenance activities: Modification, surveillance, post-maintenance testing, and corrective and preventive maintenance.

These maintenance activities are data gathering or calculation activities, such as thermography and vibration, that are non-intrusive and do not pose significant risk to public health and safety from a worker fatigue error.

The basis for the exclusion of these maintenance activities from covered work is the non-intrusive nature of the activity precludes the risk of a worker fatigue error on safety significant equipment. The source document that requires the predictive maintenance activity does not change the risk. Including technical specifications requirements as a qualifier increase the complexity of the implementation guidance without benefit. In addition, the staff's position will introduce inconsistency in application with the requirement to include technical specification associated predictive maintenance. Technical specifications vary from plant to plant. It is possible one plant would have a maintenance task as covered work and another plant with the same task not included as covered work simply due to the version of technical specification that the station has incorporated. These type of differences would lead to regulatory and inspection inconsistencies.

Industry Position:

The industry's position is included in NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1 Section 6.2 and is summarized below.

Work hour controls do not apply to the following individuals and activities:

Maintenance, as defined per Part 26, does not include activities that have not historically been defined as maintenance, that are non-intrusive, or pose low risk to the health and safety of the public such as, calculations, non-destructive analysis (NDE), thermography, vibration analysis, data collection and analysis.

Note: At times an activity requires starting or stopping a piece of equipment. The worker starting or stopping the equipment would be performing covered work under the operating category; however, the data collection activity would not be considered a covered work activity.

Regulatory Position 2

As discussed previously under periodic overtime, Section 7.1 provides guidance for use of periodic overtime that does not result in a schedule change. Additionally, it provides guidance to avoid abuse of scheduled overtime without consideration of a shift schedule change.

The NRC is requested to endorse the guidance provided in NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1 Section 7.1, "Periodic Overtime."

Regulatory Position 3

This position has been incorporated into NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1.

Regulatory Position 4

This position has been incorporated into NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1.

Regulatory Position 5

This position has been incorporated into NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1.

Regulatory Position 6

The industry requests that the staff reconsider their position on eligibility for outage minimum days off and endorse a requirement that a minimum of one (1) Reactor Operator and one (1) Senior Reactor Operator for each operating reactor at a multi-unit station will not be eligible for outage minimum days off and the 25% criteria for determining participation in outage activities will be deleted. These changes are incorporated in NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1.

Regulatory Position 7

As was discussed during the October 16 public meeting on the fatigue management rule, the proposed paragraph for review of job performance data is an unnecessary increase in scope of the annual review and not required by the rule. The rule requires that as a minimum job worker performance be reviewed under three conditions:

- ◆ Individuals whose actual work hours worked during the review period exceeded an average of 54 hours per week in any shift cycle while the individuals' work hours are subject to the requirements of § 26.205(d)(3)
- ♦ Individuals that were granted more than one waiver during the review period
- ◆ Individuals that were assessed for fatigue under §26.211 during the review period

The proposed paragraph does not contain this minimum list of qualifiers for the review and could be interpreted as a need to review all job performance data at the station in respect to the effects of duration, frequency, and sequencing of work hours on performance on annually.

Based on the feedback received, the implementation guidance has been revised to include an emphasis on worker performance in the review. It is requested that the NRC endorse the review requirement that is included in NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1.

Licensees shall:

Review the actual work hours of covered individuals for consistency with work hours scheduling requirement objective of preventing impairment from fatigue due to duration, frequency, and sequencing of hours worked. The review should be based on information associated with fatigue, including but not limited to, the corrective action program. At a minimum, this review should address:

- ♦ Individuals whose actual hours worked during the review period exceeded an average of 54 hours per week in any shift cycle while the individuals' work hours are subject to the non-outage days off requirements.
- ♦ Individuals who were granted more than one waiver during the review period.
- Individuals who were assessed for fatigue during the review period.

Regulatory Position 8

No Comment

Additional Comments

Shift Turnovers

The description of shift turnovers in NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision E provides a constraint that is not required by the rule. The NEI guidance allowed the licensee to only exclude one period of shift turnover time from work hour calculations. As the industry has begun preparing schedules and procedures for implementing this rule, it has become apparent that some category of workers requires a shift turnover at the beginning and the end of the work period to safely and effectively transfer job positions. This has made it necessary to revise the industry guidance on shift turnovers to align with rule requirements.

It is requested that the NRC endorse the revised shift turnover guidance that is included in NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1:

Shift turnovers

Licensees may exclude shift turnover from the calculation of an individual's work hours. Shift turnover includes only those activities that are necessary to safely transfer information and responsibilities between two or more individuals between shifts. Shift turnover activities may include, but are not limited to, discussions of the status of plant equipment, and the status of ongoing activities, such as extended tests of safety systems and components. Turnovers for supervisors may be more extensive than for workers and will therefore may be longer. Turnover may include time necessary to prepare for specific job requirements for example arming and disarming times for security guards or donning or un-donning of protective clothing for radiation workers as necessary to support turn-over.

Licensees may exclude either the on-coming or off-going shift turnover, but not both, from the calculation of break times between successive work periods.

Licensees may not exclude work hours worked during turnovers between individuals within a shift period due to rotations or relief within a shift. Activities that licensees may not exclude from work hours calculations also include, but are not limited to, shift holdovers to cover for late arrivals of incoming shift members; early arrivals of individuals for meetings, training, or pre-shift briefings for special evolutions; and holdovers for interviews needed for event investigations.

Training

Changes have been made to NEI 06-11, "Managing Personnel Fatigue at Nuclear Power Reactor Sites," Revision 1 to provide reference to NEI 03-04, "Guideline for Plant Access Training," for specific training objectives that are a requirement of the rule. These references appear in Sections 1, Introduction, Section 12, Fatigue Assessments, and Section 14, Training.

It is requested that the NRC endorse these changes in NEI 06-11 "Managing Personnel Fatigue at Nuclear Power Reactor Sites" Revision 1.

Section 1

This guide provides an approach to meeting 10 CFR Part 26, Subpart I requirements related to managing personnel fatigue at power reactor sites. The management of

fatigue is integrated into the industry's fitness-for-duty program and is addressed in NEI 06-11, Managing Personnel Fatigue at Nuclear Power Reactor Sites, NEI 03-01, Nuclear Power Plant Access Authorization Program and NEI 03-04, Guideline for Plant Access Training.

Section 12

Licensees shall ensure that fatigue assessments are applicable for all individuals in the FFD Program under the following conditions and are conducted by personnel trained in accordance with NEI 03-04.

Section 14

This section describes the level of training to meet the requirements of 10 CFR 26 Subpart I. The KA's and objectives are further defined in NEI 03-04.

The specific training objectives relating to the fatigue KA's are implemented within NEI 03-04 and should ensure the workers are able to:

Consideration for Enforcement Discretion

The industry has discussed with the NRC staff that the requirements of the fatigue rule and the implementation guidance will result in the need to increase staff. In some cases, such as Security the nominal staffing increases expected across the industry is 20%. The time required in hiring and training of the new staff may result in challenges as the rule is implemented and could lead to an increase in the use of waivers. The industry asks the NRC to consider a period of 6 months of enforcement discretion following the implementation date of October 1, 2009 in order to facilitate transition to the new rule.